R E P O R T R E S U M E S

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A REVIEW OF SELECTED PROGRAM ACTIVITIES IN THE EDUCATION OF THE DEAF.

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PREPARED BY THE NATIONAL ADVISORY COMMITTEE ON EDUCATION OF THE DEAF, THE BOOKLET EXPLAINS PROGRAMS SPONSORED BY THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE FOR THE PURPOSE OF ASSISTING DEAF CHILDREN AND YOUTH TO DEVELOP THEIR TALENTS AND PREPARE FOR RESPONSIBLE CITIZENSHIP. SEVERAL SCHOOLS ARE DISCUSSED, SOME ESTABLISHED (GALLAUDET COLLEGE) AND SOME IN THE PLANNING STAGES (NATIONAL TECHNICAL SCHOOL FOR THE DEAF, MODEL SECONDARY SCHOOL FOR THE DEAF). JUSTIFICATION FOR EXISTENCE, ENROLLMENT FIGURES, ADMISSION REQUIREMENTS, DESCRIPTION OF ACADEMIC PROGRAM, AND SOURCES OF FINANCIAL SUPPORT ARE GIVEN WHERE POSSIBLE. ALSO DESCRIBED ARE (1) THE NATIONAL ADVISORY COMMITTEE ON EDUCATION OF THE DEAF, WHICH MAKES RECOMMENDATIONS FOR CARRYING OUT FEDERAL PROGRAMS, (2) THE CAPTIONED FILMS PROGRAM, A LOAN SERVICE OF FILMS FOR THE DEAF, WHICH PROVIDES EDUCATION AND CULTURAL ENRICHMENT FOR THE DEAF AND TRAINS PERSONS TO USE THE FILMS, (3) TEACHER TRAINING PROGRAMS IN DEAF EDUCATION, WHICH ARE PROVIDED IN THE FORM OF GRANTS-IN-AID TO INSTITUTIONS OF HIGHER EDUCATION, (4) RESEARCH AND DEMONSTRATION PROGRAMS, BOTH FOR THE DEAF AND FOR HANDICAPPED CHILDREN IN GENERAL, (5) PUBLIC LAWS 89-10 AND 89-313, WHICH PROVIDE FUNDS FOR EDUCATION OF THE HANDICAPPED, AND (6) THE NATIONAL INSTITUTE FOR NEUROLOGICAL DISEASES AND BLINDNESS. FOR EACH TYPE OF SERVICE AUTHORIZING LEGISLATION IS CITED, THE PROGRAM IS PRESENTED, AND THE OFFICE HAVING PRIME ADMINISTRATIVE RESPONSIBILITY IS LISTED. (JB)

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programs for the handicapped

a review of

Selected Program Activities in the Education of the Deaf

by the

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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December 29, 1967
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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
John W. Gardner, Secretary--Lisle C. Carter, Jr., Assistant Secretary
for Individual and Family Services
Washington, D. C. 20201

INTRODUCTION

The Department of Health, Education, and Welfare has taken many steps to assist deaf children and youth in fully developing their talents to prepare them to be responsible citizens in our society and to offer them opportunities for educational and cultural enrichment of their lives.

Many of the advances and techniques in education for the deaf have application in teaching children with other handicapping conditions, and to the whole educational spectrum. We are within reach of the ultimate realization of the great goal of the deaf: clear communication among all people.

Some of the Department's programs mentioned here are directed specifically towards meeting the needs of the deaf; others are those programs which benefit all handicapped children, including the deaf.

The responsibility for coordinating the Department's programs for the deaf rests with Dr. Paul Miller, Assistant Secretary for Education. This report was prepared by Mrs. Patria Forsythe, Executive Secretary, National Advisory Committee on Education of the Deaf, and Miss Judith Fein, Staff Assistant. For additional information concerning this report write to The National Advisory Committee on Education of the Deaf, U.S. Department of Health, Education, and Welfare, Washington, D.C. 20201.

GALLAUDET COLLEGE

Gallaudet College, the only college in the world devoted exclusively to the education of deaf persons, received full accreditation in 1957 from the Middle States Association of Colleges and Secondary Schools. This was reaffirmed in the spring of 1967. It is a private, non-profit liberal arts institution serving approximately 1,063 students. The Graduate School offers master's degree programs in audiology and in teaching the deaf. The teacher training program accepts both hearing and deaf students, the latter usually selecting secondary education as their major area (English, mathematics, social studies, science.) In addition, Gallaudet operates the Kendall School for deaf children and a pre-school program for very young deaf children.

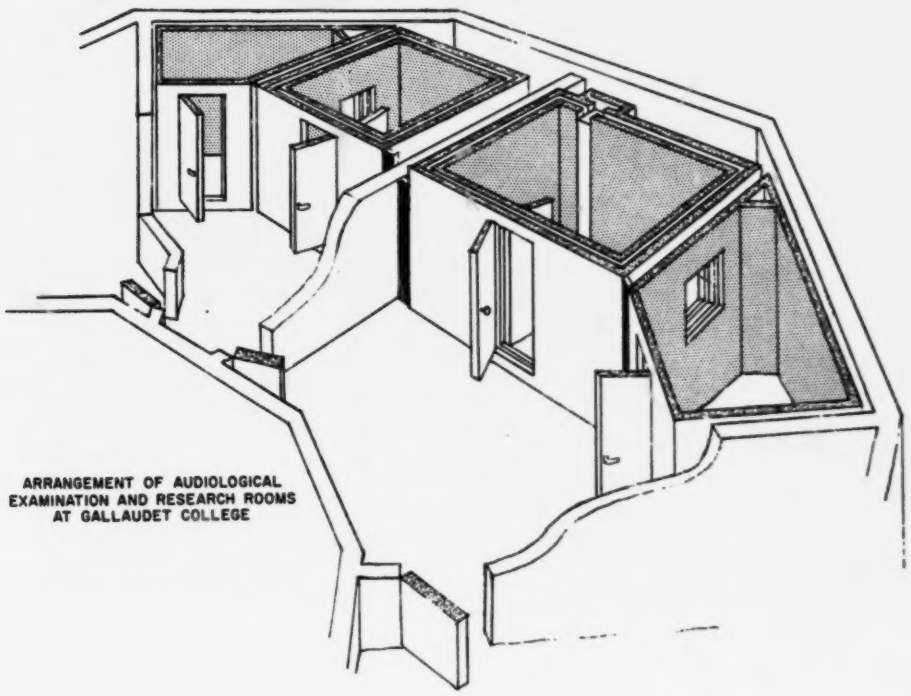
On January 1, 1963, Dean George Detmold stated that "As long as Gallaudet continues to be the only college for the deaf, we have an obligation to accept any applicant whom we have reason to believe can succeed here. We should never limit our admissions to the best prepared few. As long as we continue to challenge the unusually able student, we have no justification for turning away the average student: he has no place to go for a college education if we do not accept him." 1/

1/ Education of the Deaf; A Report to the Secretary of Health, Education, and Welfare by his Advisory Committee on Education of the Deaf (Washington, U.S. Government Printing Office, 1965) p. 56.

Admission to Gallaudet is dependent on qualifying examinations and the fact that the student cannot participate effectively in the regular college program for hearing students. The academic record of the student and his apptitude are evaluated in relation to the amount of hearing loss and the age of onset of his hearing problem. There are a number of foreign students attending Gallaudet who plan to return to their native countries with a knowledge of the methods and classroom techniques employed in teaching the deaf in the United States. These students are strongly encouraged to obtain training on the graduate school level in order to broaden their exposure and personal experience.

Enrollment figures, both exact and projected, are as follows:

	1965 (exact)	1966 (exact)	1967 (est.)	1968 (est.)
Gallaudet College	854	985	937	1012
Kendall School	128	145	181	195
Preschool	26	27	43	50
Graduate School	18	36	36	42



Arrangement of Audiological Examination and Research Rooms at Gallaudet College

The regular four-year curriculum at Gallaudet is equivalent to that of other liberal arts colleges of similar size. Gallaudet continually strives to strengthen this liberal arts program to the exclusion of technical and vocational education which will now be provided by the National Technical Institute for the Deaf. The need for Gallaudet to remain a liberal arts college is accentuated by reports from the Department of Labor which reveal that the demand for unskilled workers will be as low as 5% in 1970.

In addition to the regular curriculum, a preparatory program, designed to supplement the secondary education of prospective college students who do not yet fulfill entrance requirements, is administered annually to approximately 85% of the incoming students. Extracurricular activities at Gallaudet include an active student government association, drama department, modern dance group, and graphic arts program.

Gallaudet College undergraduates attend lectures, receive speech therapy and participate in public speaking exercises in the Hearing and Speech Program.

Gallaudet is controlled by a Board of Directors composed of 13 persons. Two United States Representatives and one United States Senator serve for two-year terms and ten persons are selected by the Board for unlimited terms as vacancies occur. One of the ten positions is a 3-year term reserved for a member of the Gallaudet Alumni Association, an organization which contributes

heavily to Gallaudet's financial coffers. The faculty at Gallaudet numbers nearly 170 at present, with 16% holding Ph.D.'s and 70% having Master's Degrees.

Approximately two-thirds of Gallaudet's operating budget is provided by Congressional appropriation through the Department of Health, Education, and Welfare budget. Since 1956, Congress has also appropriated approximately $14 million for the construction of modern facilities. For Fiscal Year 1966 the total operating income for Gallaudet was $3,593,000, with $2,301,000 of this amount appropriated by Congress. The Congressional appropriation for construction in fiscal year 1966 was $384,000.

Other sources of financial support are the following:

1. Payments from state vocational rehabilitation agencies.

2. The District of Columbia.
   The education of students from the District of Columbia is paid by the D.C. government through the secondary level. An act of March 1, 1901, provides that these funds be provided at a rate of not less than $1,640 per student per school year.

3. States of Maryland and Virginia.
   The Preschool and Kendall School receive support from Maryland and Virginia. The amount of support is dependent upon the number of students from those states who attend these classes.

4. Parents.

Gallaudet is also authorized "to receive by gift, devise, bequest, purchase or otherwise, property, both real and personal, for the use of said Gallaudet College..." (P.L. 83-420).

P.L. 83-420 provides Gallaudet with full private, corporate ownership and complete property rights subject to the following provisions:

1. The Secretary of Health, Education, and Welfare must approve any property transaction such as a sale or mortgage.

2. The General Accounting Office must handle all financial matters which involve Federal funds.

3. An annual report must be submitted to the Secretary of Health, Education and Welfare.

4. Persons who have permanent budgeted positions are given U.S. Civil Service Retirement, health benefits, and life insurance programs.

In addition, the Federal Government gives indirect support to Gallaudet. The Secretary of Health, Education, and Welfare, is, by custom, a member of the Board, and faculty members are eligible for research grants from various Federal agencies.

It is imperative that the faculty and administrative staff of Gallaudet College continually concern themselves with an overview of education for the deaf from pre-school through graduate school. As the only college for the deaf, Gallaudet must provide leadership for the entire nation and the world in the area of deaf education.

The specially equipped Mary L. Thornberry Memorial Building houses the Hearing and Speech Center, the Diagnostic and Evaluation Clinic, The Preschool, the Acoustic Communication Research Laboratory, the Audiological and Speech Program for Undergraduates of Gallaudet College, and the administrative offices of the Graduate School.

NATIONAL TECHNICAL INSTITUTE FOR THE DEAF

The National Technical Institute for the Deaf Act became Public Law 89-36 on June 8, 1965. This legislation provides for a residential, post-secondary technical education facility which will prepare young deaf adults for successful employment.

Approximately 3,000 deaf students 16 years of age and over graduate or leave state and local schools and classes for the deaf each year. Prior to the passage of P.L. 89-36, Gallaudet College was the only institution of higher education for the deaf in the United States. Gallaudet, a liberal arts college, can accommodate less than half of those who apply for admission. Thus, a large number of deaf young adults who desire further education and training cannot achieve it. Five-sixths of the deaf adult population, as compared to one-half of the hearing population, work in manual jobs. Without advanced training, few employment opportunities are available outside of the ranks of unskilled labor. The National Technical Institute for the Deaf will help prepare a greater proportion of deaf youth for more highly skilled jobs.

A twelve-member Advisory Board on the Establishment of the National Technical Institute for the Deaf was appointed by the Secretary of Health, Education, and Welfare to advise him regarding the location of the Institute. On the recommendation of this Board, the Secretary, on December 20, 1966, entered into an agreement with Rochester Institute of Technology, Rochester, New York, to establish and operate the Institute. The Department of Health, Education, and Welfare will maintain continuous relationship with RIT in the operation of the Institute. The appointment of Dr. D. Robert Frisina as chief administrative officer for the NTID was announced by Rochester Institute of Technology on January 13, 1967.

The establishment of the Institute represents a pioneering effort to provide deaf citizens with broad post-secondary technical education and training leading to diversified opportunities for productive employment. The National Technical Institute for the Deaf is designed not only to provide education and training for deaf students, but also to be a pace-setter for technical training of deaf people generally. In addition, it will serve as a research and training source for special teachers, counselors, and other professional personnel whose services are essential for the adjustment of deaf persons.

NATIONAL ADVISORY COMMITTEE ON EDUCATION OF THE DEAF

The National Advisory Committee on Education of the Deaf is a statutory Committee, authorized by Section 5 of Public Law 89-258, and composed of educators of the deaf, persons interested in education of the deaf, educators of

the hearing, and deaf individuals.

The functions of the Advisory Committee are to make recommendations to the Secretary of the Department of Health, Education, and Welfare concerning the carrying out of existing programs and the development of new or modified programs for the education of the deaf. The Committee makes such other recommendations for administrative action or legislative proposals as may be appropriate.

One of the first assignments the National Advisory Committee undertook was to plan a National Conference on Education of the Deaf. The Conference was held April 12-15, 1967, at The Broadmoor, Colorado Springs, Colorado. The purpose of the Conference was to bring together outstanding workers in the education of the deaf and important related fields. The conferees considered effective ways to encourage the development of State plans for the coordination of comprehensive educational and corollary services for the deaf.

The Advisory Committee is also required by law to carry out the following functions: (1) make recommendations to the Secretary for the development of a system for gathering information on a periodic basis in order to facilitate the assessment of progress and identification of problems in the education of the deaf; (2) identify emerging needs respecting the education of the deaf, and suggest innovations which give promise of meeting such needs and of otherwise improving the educational prospects of deaf individuals; and (3) suggest promising areas of inquiry to give direction to the research efforts of the Federal Government in improving the education of the deaf. 1/

MODEL SECONDARY SCHOOL FOR THE DEAF

In February 1965, a report, entitled "Education of the Deaf," based on a comprehensive study of education programs for the deaf, was issued by the Department of Health, Education, and Welfare. This report reveals significant inadequacies and gaps in the educational services for the deaf and indicates that there is no genuine secondary school program for deaf persons in the United States.

The common problem among these severely handicapped people is one of communication. This handicap is frequently manifested in limited language skills, in poor speech production and reception, in serious educational retardation, and in emotional and social maladjustment.

The handicapping aspects of deafness are the result of inadequate education. Education of the deaf individual often begins too late and ends too soon. Most residential schools for the deaf have programs which provide the equivalent of

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1/ Public Law 89-258, 89th Congress, October 19, 1965.

an eighth grade education. Very few of the specialized day school programs go beyond elementary school levels. Students who wish to continue their education are expected to transfer to regular high schools and vocational schools for hearing children. Because of the serious communication problem involved, only about one percent of the deaf children attending day and residential schools communicate well enough to enter these hearing schools. The result is that only 8% of any age group of deaf students is now admitted to college as compared to 53% of the general population. A deaf person's opportunities for higher education are thus severely restricted because of lack of adequate preparation for college.

To alleviate this problem, President Johnson signed the Model Secondary School for the Deaf Act into law on October 15, 1966.

Public Law 89-694 authorizes the Secretary of the Department of Health, Education, and Welfare, after consultation with the National Advisory Committee on Education of the Deaf, to enter into an agreement with Gallaudet College for the establishment and operation, including construction and equipment, of a model secondary school for the deaf to serve primarily residents of the District of Columbia and of nearby states.

This high school, while serving primarily the needs of the National Capital Area and nearby states, will also provide a model for the development of similar programs across the country. In addition, the formulation of new educational methods and educational technology and specific curriculum offerings will contribute to the Nation's total educational program for the deaf.

It is expected that the concept of this model school will grow to the extent that every deaf high school age student will eventually have the opportunity for an education equal to that of his hearing peers and commensurate with his abilities and desires.

CAPTIONED FILMS FOR THE DEAF

On September 2, 1958, a law was enacted to provide a loan service of captioned films for the deaf in the Department of Health, Education, and Welfare. Public Law 85-905 was enlarged in 1962 with the passage of P.L. 87-715 and expanded again in 1965 when Congress passed Public Law 89-258.

The basic concept of P.L. 85-905 is to promote the general welfare of the deaf. It brings to deaf people an understanding and appreciation of films which play an important part in the general and cultural advancement of hearing persons. It promotes educational and cultural experiences through which deaf persons can be brought into closer touch with the realities of their environment.

In 1963, the Congress increased the authorization and broadened the purposes of the Captioned Films program. It now promotes the educational advancement of deaf persons through research in the use of educational and training films for

the deaf, production and distribution of educational and training films for the deaf, and training of persons in the use of films for the deaf.

Teacher Using Captioned Films for
Instructional Purposes

The expanded program under P.L. 89-258 makes materials and services available not only to deaf persons but also to parents of deaf children, to social and rehabilitation workers for the deaf, and to employers of hearing impaired persons.

During the summer of 1966, summer institutes for training teachers of the deaf in the use of new media were arranged through the Captioned Films program at three leading universities.

The major activity of the program is that of supplying educational materials and media equipment to some 35,000 deaf children in more than 400 schools and classes throughout the United States. Items supplied on loan include filmstrips, movies, overhead projectors, filmstrip projectors, and screens. The materials especially produced for the instruction of deaf children include films for teaching lipreading and fingerspelling, special filmstrips for reading instruction, and records for auditory training.

Captioned films may be borrowed by groups composed of three or more deaf persons. The groups borrowing the films must certify that a borrowed film will be exhibited only to groups of deaf persons, will not be exhibited to an audience where an admission fee is charged, will not be broadcasted by television, and will not be used in a manner that will infringe upon or violate any copyright interest.

The accredited colleges and universities which are chosen for participation are awarded grants-in-aid which are used to establish new teacher training programs, improve already existing programs, and provide scholarships for interested and qualified persons to become teachers of the deaf.

Upon approval or modification by the advisory panel, the recipient institution can award two types of scholarships to the individual student. One is a senior year traineeship which provides $2,000 for the institution and $1,600 for the undergraduate student in his senior year. The second type is a post-baccalaureate fellowship which makes available to the institution up to $2,500 per student per year. The student is given $2,000 in his first year, $2,400 in his second year, and $2,800 in his third year. In addition, $600 per year is allotted for each dependent. The average output per student per year is $5,700. Awards are also made to state departments of education, and summer institutes for upgrading the quality of teaching have been established with Federal funds.

For Fiscal Year 1967-68, 135 senior year traineeships, 299 fellowships for the Master's Degree and 21 fellowships for the postmaster's degree have been awarded. The current appropriation in the area of the deaf is approximately $2,635,000.

A national conference was held in March 1964 to meet the increased demand for leadership personnel at the college or university level, the influx of requests from numerous training centers for aid in upgrading course work and developing functional guidelines, and the concern for quality in teacher preparation programs. The outcomes of this meeting are contained in an Office of Education publication entitled "Preparation of Teachers of the Deaf".

Future efforts must be directed toward training of leadership personnel. The Office of Education hopes to sponsor study groups to map out the future course, calling in consultants to clarify the relationship between education, research and counseling. Secondary emphasis will be directed toward utilization of innovative methods developed in the Captioned Films for the Deaf program and other areas. If educational research is to be implemented in the classroom, training institutions must be provided with the newest developments in techniques and skills. It is thus essential that all agencies interested in education of the deaf cooperate closely for maximum effectiveness. The Bureau of Education for the Handicapped continues to support strong cooperation between the Divisions of Research, Educational Services, and Training Programs, and to strengthen efforts through the Division of Training Programs for recruitment of highly qualified personnel to become teachers of the deaf.

RESEARCH AND DEMONSTRATION

The research and demonstration program for the handicapped was established by Public Law 88-164 and extended under Public Law 89-105. P.L. 89-105 also provides for construction authority to establish a research and development center for education of handicapped children and youth.

Printing error –
Reverse pages 10 and 11

The Captioned Films for the Deaf Branch is located in the newly established Bureau of Education for the Handicapped, Division of Educational Services, U.S. Office of Education. Mr. John Gough is Chief and Acting Director of the Division of Educational Services.

The response of the deaf to the program has been uniformly enthusiastic. A new dimension has been brought into the cultural and recreational lives of deaf people with the entertainment films while the instructional materials are viewed as an important aid for increasing educational achievement.

TEACHER TRAINING

On September 22, 1961, Public Law 87-276 was signed into law by President John F. Kennedy, thus heralding a most significant step in the training of teachers of the deaf. During the academic year 1961-1962 there were thirty-two training centers in operation; today that number has leaped to 65, 54 of which receive Federal support. The number of new teachers has shown an equally dramatic rise. The average number of prospective teachers was approximately 125 from 1950 to 1960. Today there are more than 500 annual graduates of the training centers, and the majority have received direct support from the Federal program.

Although most of these graduates are entering the field, there is still a shortage of teachers for the 50,000 youngsters in the U.S. who have hearing impairments. During the committee hearings on P.L. 87-276, a shortage of 500 teachers was established as well as the substandard training of approximately 800 persons already teaching the deaf. It was estimated that approximately 8,000 children were not receiving the specialized education necessitated by their handicapping condition. P.L. 87-276, which has twice been amended, was thus designed to help remedy a severe problem.

The present law, 89-105, is administered by the Bureau of Education for the Handicapped, Division of Training Programs, Acting Director, Dr. Richard C. Schofer, in the U. S. Office of Education, which estimates that there is currently a need for an additional 600 teachers of the deaf. Due to the 1964-65 rubella epidemic, the number of hearing impaired is expected to rise sharply. A noticeable increase of interest over recent years in training for deaf children below six years of age will also necessitate additional staff.

The most critical shortage is in the area of leadership--school supervisors and teachers to teach the teachers. This is a major area of concern, for thus far only forty post-master's degree fellowships have been awarded. The results of these awards are just becoming apparent since the first ones were made as recently as September of 1965.

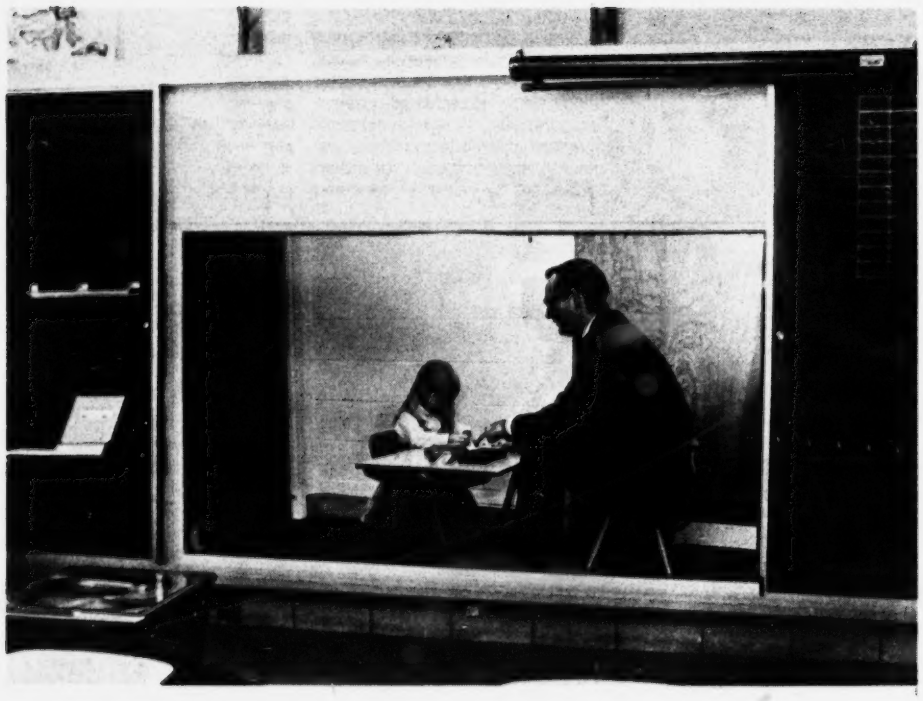
The law specifies that an institution which is interested in participating must send a proposal to the Office of Education. Proposals are reviewed by advisory panels knowledgeable in the area of education of the deaf.

Visual aids supplement auditory training in the development of speech and language at Kendall School, Gallaudet College.

The general purposes of the research and demonstration program under P.L. 88-164, approved October 31, 1963, are: (a) to translate findings of research from the social and behavioral sciences into practical applications for the education of handicapped children and youth; (b) to generate programs and procedures for classroom teachers and education specialists who will make full use of known facts, ideas, and theories; (c) to create educational environments in which the implementation of new programs, procedures, and processes may be demonstrated; and (d) generally to improve the education of handicapped children and youth through innovations in learning situations as well as in classroom procedures, methods, and materials.

Public Law 89-105 authorizes the Commissioner of Education to make grants to institutions of higher education for constructing, equipping, and operating a facility for research relating to the education of handicapped children and youth. The grant for the research center has been awarded to Teachers College, Columbia University.

The major objectives of such a center are research, demonstration, and dissemination of information. This center is designed to concentrate human and financial resources on the critical and difficult problems involved in the education of handicapped children, to bring together highly qualified researchers and teachers, and to provide a training ground for research trainees. It is expected that the center will produce new ideas, materials, and techniques for



Multidisciplinary goals of the teacher training and audiology programs of the Gallaudet Graduate School are facilitated by one-way windows, this one capable of being converted to a blackboard area by means of sliding panels.

use in classrooms for the handicapped. Such a facility will bring about a systematic attack on major problems which are now being approached by isolated research on a piece-meal basis.

The responsibility for development and administration of this program has been delegated to the Bureau of Education for the Handicapped, Division of Research, Dr. James W. Moss, Acting Director, U.S. Office of Education.

PUBLIC LAW 89-10
PUBLIC LAW 89-313

Superintendents and administrators of schools and classes for the deaf have an unprecedented opportunity, under Title I of Public Law 89-10 and Public Law 89-313 which amends it, to obtain long needed funds for deaf children. Although Title I of P.L. 89-10 does not refer specifically to the deaf and other handicapped children, the law includes them, since it provides funds for "the special educational needs of educationally deprived children living in areas where there are concentrations of low income families." The legislative intent implied in this language was referred to by Wilbur J. Cohen, Under Secretary of Health, Education, and Welfare, in a letter to Senator Wayne Morse, Chairman of the Education Subcommittee, Committee on Labor and Public Welfare, United States Senate.

Use of electronic visual pitch indicator in training of voice control.

"... In Title I, Section 205(a)(1), where reference is made to programs and projects which are designed to meet the special educational needs of educationally deprived children and with respect to the number of educationally deprived children in the school district who attend non-public schools in section 205(a)(2), the term educationally deprived children' in our opinion includes handicapped children as that term is defined in Title III of Public Law 88-164, approved October 31, 1963." 1/

Under P.L. 89-10, the local school districts, with the approval of the State Departments of Education, determine priority of needs and target areas which will receive these funds.

Under P.L. 89-10, the local school districts, with the approval of the State Departments of Education determine priority of needs and target areas which will receive these funds.

P.L. 89-10 is a tremendous potential for aid to the handicapped because of its vast appropriations. $1.2 billion has been appropriated for Fiscal Year 1967 and approximately 3%, or $30 million, is currently being used for speech and hearing projects.

1/ R. P. Mackie, "Opportunities for Education of Handicapped under Title I, Public Law 89-10," Exceptional Children, (May, 1966), 1.

Gallaudet's Kendall School provides optimal integration of amplification and speech-monitoring systems, audio-visual equipment and individualized curriculae.

On November 1, 1965, Title I of the Elementary and Secondary Education Act, P.L. 89-10, was amended by Public Law 89-313, paragraph (5), Section 6(a). P.L. 89-313 makes funds available to state agencies responsible for providing an education free of charge to handicapped children on a non-school-district basis. The amendment specifies that the handicapped children to benefit under this law are "mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired children who by reason thereof require special education." The amendment bridges an important gap, for P.L. 89-10 applies only to children in local facilities. P.L. 89-313 extends aid to handicapped children in state supported or state operated schools. The federal allocation is made according to a formula based on the average daily attendance of handicapped children in special schools operated or supported by the state. Individual agencies within the state, such as the welfare and health departments, can also obtain Federal assistance through the State Department of Education, which is responsible for the ultimate approval of each project.

There are estimated to be 18,500 deaf children in state operated or supported schools at this time. In 1965, 15,100 children were registered in the program and in 1967 the figure rose to 17,000. The total number which the legislation was designed to serve has, therefore, almost been reached. The Office of Education will continue to pursue eligible institutions.

These Federal funds, which are not to supplant state efforts but rather to

supplement them, are being used to extend and improve educational programs for the handicapped. The total allocation for the deaf in Fiscal Year 1967 is $3 million out of a total of $15 million.

Activities and a Thanksgiving theme are combined in promoting language development among the Gallaudet Preschool pupils.

Great flexibility is possible in the use of these funds, but the main emphasis thus far has been on increasing and improving direct services to handicapped children such as in-service teacher training, enlarged staffs, remedial programs and clinical services. Summer institutes have been established to provide extension of services and a continuity over the summer months when regression often occurs. Instructional centers are being designed to improve the quality and the accessibility of instructional material. Priority plans also include the extension of services downward to pre-school children and increased emphasis on the application of innovative techniques and the utilization of research developments.

The program is administered by the U.S. Office of Education, Bureau of Education for the Handicapped.

Activities and speech development are continuously combined to promote language growth at the Gallaudet Preschool.

THE NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

The National Institute of Neurological Diseases and Blindness is the medical research arm of the Public Health Service most directly concerned with speech and hearing disorders. NINDB serves as sponsor for numerous research activities and training grants, operates a vast network of programs and laboratories within its Bethesda, Maryland, and Puerto Rico complexes, and directs various collaborative and field research activities.

For Fiscal Year 1966 sixty-eight training grants in hearing and related disorders were awarded in such disciplines as audiology, communicative disorders, communicative sciences, otolaryngic pathology, and speech pathology. Over 300 postdoctoral students are being trained in these programs.

One hundred forty grants were awarded for research in the disorders of hearing and equilibrium, such as anatomical studies of the inner ear and human temporal bone pathology.

A wide range of projects is supported each year by NINDB. Five clinical center programs within academic institutions are being financed by NINDB. These are multidisciplinary centers concerned with human communication research. At the University of Chicago, where research efforts are focused primarily on hearing and equilibrium, there is extensive research with temporal bones bequeathed to the center. The causes of deafness are being studied at the Kresge Hearing Research Institute at Ann Arbor, Michigan, and the center at Central Institute for the Deaf in St. Louis, Missouri is primarily concerned with four

areas--physiology, electroencephalography, psychology, and electrical engineering and physical acoustics. Princeton University's center is doing research in the fundamental nature of hearing, and work at the University of Florida is primarily concerned with physics and physiology of voice production, the psychology of speech behavior in children, parent-child communication and first language acquisition, linguistics, and voice pathology.

"Within the intramural program, at the Bethesda laboratories, research has focused on the basic mechanism and structure of the ear, especially the anatomical passageways for hearing and the feedback mechanisms of nerves from the brain to the ear." 1/

Several of the priority research items during the past year were evaluation of the effects on hearing of various drugs, the application of computer techniques in studying the auditory system, and experimentation with direct stimulation of the hearing nerve. NINDB continues to focus research efforts in these areas.

In addition to the temporal bone research being done at the University of Chicago center, a Temporal Bone Bank has been established for the study of problems which are inaccessible during life. Thirty banks and laboratories are cooperating with NINDB on this project.

Attempts are being made to standardize the language used in describing communicative disorders as well as the tests and measurements involved.

NINDB is currently studying more than 60,000 cases of pregnancy in its Collaborative Perinatal Project. The chief purpose of this study is to obtain information about prenatal and perinatal factors which cause communicative disorders. Subsequent studies and evaluations are made of the children after birth and at various stages of development. Emphasis is thus being placed on the causes of deafness and hearing impairment during pregnancy and early childhood, and on the development of effective methods for early diagnosis and treatment.

Another important NINDB project is a much-needed Scientific Information Center at Johns Hopkins University for the evaluation and dissemination of scientific information.

For research and training in speech and hearing, NINDB's estimated budget for Fiscal Year '67 is $11,787,000. The estimate for 1968 is $13,453,000.

1/ U.S. Public Health Service, "Summary of Progress in Hearing, Language, and Speech Disorders," Research Profile, IV (1965), 7.

GPO 936-798